=> d his

(FILE 'HOME' ENTERED AT 18:19:15 ON 13 MAY 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:19:33 ON 13 MAY 2003

L1 52869 S TREHALOSE OR DISACCHARIDE
L2 25050 S (CRYOPRESERV? OR PRESERV?)(6A)CELL
L3 33384 S LOAD?(6A)CELL
L4 58264 S L2 OR L3
L5 62 S L1(7A)L4
L6 37 DUP REM L5 (25 DUPLICATES REMOVED)

=> d au ti so 1-37 l6

L6 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Levine, Fred
TI Vacuum-mediated desiccation protection of cells
SO U.S. Pat. Appl. Publ., 29 pp.
CODEN: USXXCO

L6 ANSWER 2 OF 37 MEDLINE DUPLICATE 1
AU Acker Jason P; Lu Xiao-Ming; Young Vernon; Cheley Stephen; Bayley Hagan; Fowler Alex; Toner Mehmet
TI Measurement of **trehalose loading** of mammalian **cells** porated with a metal-actuated switchable pore.
SO BIOTECHNOLOGY AND BIOENGINEERING, (2003 Jun 5) 82 (5) 525-32.
Journal code: 7502021. ISSN: 0006-3592.

L6 ANSWER 3 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AU Abadias, Maribel (1); Usall, Josep; Teixido, Neus; Vinas, Immaculada
TI Liquid formulation of the postharvest biocontrol agent Candida sake CPA-1 in isotonic solutions.
SO Phytopathology, (April 2003, 2003) Vol. 93, No. 4, pp. 436-442. print.
ISSN: 0031-949X.

L6 ANSWER 4 OF 37 MEDLINE DUPLICATE 3
AU Zhang Xiao Bing; Li Karen; Yau Kwai Heung; Tsang Kam Sze; Fok Tai Fai; Li Chi Kong; Lee Shuk Man; Yuen Patrick Man Pan
TI Trehalose ameliorates the cryopreservation of cord blood in a preclinical system and increases the recovery of CFUs, long-term culture-initiating cells, and nonobese diabetic-SCID repopulating cells.
SO TRANSFUSION, (2003 Feb) 43 (2) 265-72.
Journal code: 0417360. ISSN: 0041-1132.

L6 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Wada, Hiromi; Ohnaka, Kenji
TI Preservation fluid for cells and tissues
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2

L6 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Crowe, John H.; Crowe, Lois M.; Tablin, Fern; Wolkers, Willem F.; Tsvetkova, Nelly M.; Oliver, Ann F.
TI Erythrocytic cells and method for preserving cells
SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U.S. Ser. No. 927,760.
CODEN: USXXCO

L6 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Toner, Mehmet; Eroglu, Ali; Toth, Thomas
TI Microinjection of cryoprotectants for preservation of cells
SO U.S. Pat. Appl. Publ., 32 pp., Cont.-in-part of U.S. Ser. No. 798,327.
CODEN: USXXCO

L6 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Crowe, John H.; Tablin, Fern; Wolkers, Willem F.; Oliver, Ann E.; Walker, Naomi J.; Htoo, Thurein; Jamil, Kamran
TI Eukaryotic cells and method for preserving cells
SO U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Ser. No. 828,627.
CODEN: USXXCO

L6 ANSWER 9 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU Buchanan, S.; Gross, S.; Acker, J.; Toner, M.; Carpenter, J.; Pyatt, D.
TI A novel technique for long-term **cryopreservation** of hematopoietic progenitor **cells** using intracellular **trehalose**.
SO Experimental Hematology (Charlottesville), (June, 2002) Vol. 30, No. 6 Supplement 1, pp. 131. http://www.iseh.org/journal/. print.
Meeting Info.: 31st Annual Meeting of the International Society for Experimental Hematology Montreal, Quebec, Canada July 05-09, 2002
ISSN: 0301-472X.

L6 ANSWER 10 OF 37 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AU Buchanan S (Reprint); Gross S; Acker J; Toner M; Carpenter J; Pyatt D
TI A novel technique for long-term **cryopreservation** of hematopoietic progenitor **cells** using intracellular **trehalose**
SO EXPERIMENTAL HEMATOLOGY, (JUN 2002) Vol. 30, No. 6, Supp. [1], pp. 131-131. MA 380.
Publisher: ELSEVIER SCIENCE INC, 655 AVENUE OF THE AMERICAS, NEW YORK, NY 10010 USA.
ISSN: 0301-472X.

L6 ANSWER 11 OF 37 MEDLINE DUPLICATE 4
AU Shirakashi R; Kostner C M; Muller K J; Kurschner M; Zimmermann U; Sukhorukov V L
TI Intracellular delivery of trehalose into mammalian cells by electropermeabilization.
SO JOURNAL OF MEMBRANE BIOLOGY, (2002 Sep 1) 189 (1) 45-54.
Journal code: 0211301. ISSN: 0022-2631.

L6 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Codd, Anthony Arthur
TI Storage of microorganisms, cells and tissue
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L6 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Limaye, L. S.; Kale, V. P.
TI Cryopreservation of human hematopoietic cells with membrane stabilizers and bioantioxidants as additives in the conventional freezing medium
SO Journal of Hematotherapy & Stem Cell Research (2001), 10(5), 709-718
CODEN: JHERFM; ISSN: 1525-8165

L6 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Odintsova, Nelly; Kiselev, Konstantin; Sanina, Nina; Kostetsky, Edward
TI Cryopreservation of primary cell cultures of marine invertebrates
SO Cryo-Letters (2001), 22(5), 299-310
CODEN: CRLED9; ISSN: 0143-2044

L6 ANSWER 15 OF 37 MEDLINE DUPLICATE 5
AU Chen T; Acker J P; Eroglu A; Cheley S; Bayley H; Fowler A; Toner M
TI Beneficial effect of intracellular trehalose on the membrane integrity of dried mammalian cells.
SO CRYOBIOLOGY, (2001 Sep) 43 (2) 168-81.
Journal code: 0006252. ISSN: 0011-2240.

L6 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Crowe, John H.; Crowe, Lois M.; Oliver, Ann E.; Tsvetkova, Nelly; Wolkers, Willem; Tablin, Fern
TI The trehalose myth revisited: introduction to a symposium on stabilization of cells in the dry state
SO Cryobiology (2001), 43(2), 89-105
CODEN: CRYBAS; ISSN: 0011-2240

L6 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Kim, Sang-Ic; Choi, Hyung-Kyoon; Son, Joo-Sun; Yun, Jeong-Hwan; Jang, Moon-Suk; Kim, Hong-Rak; Song, Jai-Young; Kim, Jin-Hyun; Choi, Ho-Joon; Hong, Seung-Suh
TI Cryopreservation of Taxus chinensis suspension cell cultures
SO Cryo-Letters (2001), 22(1), 43-50
CODEN: CRLED9; ISSN: 0143-2044

L6 ANSWER 18 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU Crowe, John H. (1); Crowe, Lois M. (1)
TI Preservation of mammalian cells-learning nature's tricks.
SO Nature Biotechnology., (Feb., 2000) Vol. 18, No. 2, pp. 145-146.
ISSN: 1087-0156.

L6 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 6
AU Otsubo, Mayuko; Iwaya-Inoue, Mari
TI Trehalose delays senescence in cut gladiolus spikes
SO HortScience (2000), 35(6), 1107-1110
CODEN: HJHSAR; ISSN: 0018-5345

L6 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Bachiri, Y.; Bajon, C.; Sauvanet, A.; Gazeau, C.; Morisset, C.
TI Effect of osmotic stress on tolerance of air-drying and cryopreservation of Arabidopsis thaliana suspension cells
SO Protoplasma (2000), 214(3-4), 227-243
CODEN: PROTA5; ISSN: 0033-183X

L6 ANSWER 21 OF 37 MEDLINE DUPLICATE 7
AU Eroglu A; Russo M J; Bieganski R; Fowler A; Cheley S; Bayley H; Toner M
TI Intracellular **trehalose** improves the survival of **cryopreserved** mammalian **cells**.
SO NATURE BIOTECHNOLOGY, (2000 Feb) 18 (2) 163-7.
Journal code: 9604648. ISSN: 1087-0156.

L6 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Livesey, Stephen Anthony; Burnett, Michael Brian; Connor, Jerome; Wagner, Christopher Todd
TI Cryopreservation of human red blood cells
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2

L6 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2003 ACS
TI Method for cryopreservation of human and animal hemopoietic cells
SO Ger. Offen., 2 pp.
CODEN: GWXXBX

L6 ANSWER 24 OF 37 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AU Kappicht S (Reprint); Kolb H J; Schleuning M
TI **Trehalose** - An alternative to DMSO in **cryopreservation** of hematopoietic **cells**.
SO BONE MARROW TRANSPLANTATION, (MAR 1999) Vol. 23, Supp. [1], pp. 675-675.
Publisher: STOCKTON PRESS, HOUNDMILLS, BASINGSTOKE RG21 6XS, HAMPSHIRE, ENGLAND.
ISSN: 0268-3369.

L6 ANSWER 25 OF 37 MEDLINE DUPLICATE 8

AU Diniz-Mendes L; Bernardes E; de Araujo P S; Panek A D; Paschoalin V M
TI **Preservation** of frozen yeast **cells** by **trehalose**.
SO BIOTECHNOLOGY AND BIOENGINEERING, (1999 Dec 5) 65 (5) 572-8.
Journal code: 7502021. ISSN: 0006-3592.

L6 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Beattie, Gillian M.; Crowe, John H.; Tablin, Fern; Hayek, Alberto
TI Cryopreservation of human adult and fetal pancreatic cells and human platelets
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2

L6 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Wiggins, Philippa M.; Ferguson, Alexander B.; Watson, James D.
TI Methods for the preservation of cells and tissues using trimethylamine oxide or betaine with raffinose or trehalose
SO U.S., 36 pp., Cont.-in-part of U.S. Ser. No. 662,244.
CODEN: USXXAM

L6 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Bronshtein, Victor
TI Loading and unloading of permeating protectants for cell, tissue, and organ cryopreservation by vitrification
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L6 ANSWER 29 OF 37 MEDLINE DUPLICATE 9
AU Isowa N; Hitomi S; Wada H
TI **Trehalose**-containing solutions enhance **preservation** of cultured endothelial **cells**.
SO ANNALS OF THORACIC SURGERY, (1996 Feb) 61 (2) 542-5.
Journal code: 15030100R. ISSN: 0003-4975.

L6 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Dong, Xi; Uemura, Tsuguo; Yatsuhashi, Ryozo; Hori, Hiromasa; Minaguchi, Hiroshi
TI A study on cryopreservation procedures of mouse 2-cell embryos
SO Nippon Funin Gakkai Zasshi (1995), 40(2), 176-80
CODEN: NFGZAD; ISSN: 0029-0629

L6 ANSWER 31 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU Israeli, Eitan; Shaffer, Brenda T.; Lighthart, Bruce (1)
TI Protection of freeze-dried Escherichia coli by trehalose upon exposure to environmental conditions.
SO Cryobiology, (1993) Vol. 30, No. 5, pp. 519-523.
ISSN: 0011-2240.

L6 ANSWER 32 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 10
AU Leslie, S. B. (1); Israeli, E.; Crowe, J. H. (1)
TI **Trehalose preserves** membranes and proteins in intact **cells**.
SO Biophysical Journal, (1993) Vol. 64, No. 2 PART 2, pp. A294.
Meeting Info.: Thirty-seventh Annual Meeting of the Biophysical Society Washington, D.C., USA February 14-18, 1993
ISSN: 0006-3495.

L6 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2003 ACS
IN Davis, Kenneth A.
TI **Trehalose** in **preservation** of **cells** as controls or standards in cellular analysis
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW

L6 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Watanabe, Kiyohiko
TI Effective use of 1,2-propanediol and **trehalose** for the **cryopreservation** of mouse 2 **cell** embryos as cryoprotectants or dilutions
SO Fukushima Igaku Zasshi (1990), 40(1), 55-61
CODEN: FSIZAQ; ISSN: 0016-2582

L6 ANSWER 35 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU JEYALECTUMIE C; SUBRAMONIAM T
TI CRYOPRESERVATION OF SPERMATOPHORES AND SEMINAL PLASMA OF THE EDIBLE CRAB SCYLLA-SERRATA.
SO BIOL BULL (WOODS HOLE), (1989) 177 (2), 247-253.
CODEN: BIBUBX. ISSN: 0006-3185.

L6 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2003 ACS
AU Coutinho, C.; Bernardes, E.; Felix, Durvalina; Panek, Anita D.
TI Trehalose as cryoprotectant for preservation of yeast strains
SO Journal of Biotechnology (1988), 7(1), 23-32
CODEN: JBITD4; ISSN: 0168-1656

L6 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 11
AU Bhandal, Iqbal S.; Hauptmann, Randal M.; Widholm, Jack M.
TI **Trehalose** as cryoprotectant for the freeze **preservation** of carrot and tobacco **cells**
SO Plant Physiology (1985), 78(2), 430-2
CODEN: PLPHAY; ISSN: 0032-0889

=> d bib 22 23 26-28 33 l6

L6 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2003 ACS
AN 1999:763819 CAPLUS
DN 132:1812
TI Cryopreservation of human red blood cells
IN Livesey, Stephen Anthony; Burnett, Michael Brian; Connor, Jerome; Wagner, Christopher Todd
PA Lifecell Corporation, USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9960849	A1	19991202	WO 1999-US11674	19990526
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2332986	AA	19991202	CA 1999-2332986	19990526
	AU 9942097	A1	19991213	AU 1999-42097	19990526
	EP 1082006	A1	20010314	EP 1999-925899	19990526
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002516254	T2	20020604	JP 2000-550327	19990526
PRAI	US 1998-86836P	P	19980526		
	WO 1999-US11674	W	19990526		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2003 ACS
AN 1999:425893 CAPLUS
DN 131:56145
TI Method for cryopreservation of human and animal hemopoietic cells
PA Schleuning, Michael, Germany
SO Ger. Offen., 2 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19758073	A1	19990701	DE 1997-19758073	19971230
PRAI	DE 1997-19758073		19971230		

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2003 ACS
AN 1998:219678 CAPLUS
DN 128:215268
TI Cryopreservation of human adult and fetal pancreatic cells and human platelets
IN Beattie, Gillian M.; Crowe, John H.; Tablin, Fern; Hayek, Alberto
PA Regents of the University of California, USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9814058	A1	19980409	WO 1997-US17591	19970929
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5827741	A	19981027	US 1996-753034	19961119
	AU 9746596	A1	19980424	AU 1997-46596	19970929
PRAI	US 1996-27853P	P	19961003		
	US 1996-753034	A	19961119		
	WO 1997-US17591	W	19970929		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2003 ACS
AN 1998:700950 CAPLUS
DN 129:313119
TI Methods for the preservation of cells and tissues using trimethylamine oxide or betaine with raffinose or trehalose
IN Wiggins, Philippa M.; Ferguson, Alexander B.; Watson, James D.
PA Biostore New Zealand Ltd., N. Z.
SO U.S., 36 pp., Cont.-in-part of U.S. Ser. No. 662,244.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

	US 5827640	A	19981027	US 1996-722306	19960930
	US 5879875	A	19990309	US 1996-662244	19960614
	US 6114107	A	20000905	US 1997-842553	19970415
	ZA 9710452	A	19980610	ZA 1997-10452	19971120
	US 5962213	A	19991005	US 1997-989470	19971212
	US 6060233	A	20000509	US 1998-60770	19980415
	US 6037116	A	20000314	US 1998-85318	19980526
	US 6040132	A	20000321	US 1998-85334	19980526
	US 6361933	B1	20020326	US 2000-512139	20000223
	AU 742402	B2	20020103	AU 2001-10037	20010103
	US 2002177116	A1	20021128	US 2002-96635	20020312
PRAI	US 1996-662244	A2	19960614		
	AU 1996-61412	A3	19960614		
	WO 1996-NZ57	A	19960614		
	US 1996-722306	A2	19960930		
	US 1997-842553	A2	19970415		
	US 1997-989470	A2	19971212		
	US 1998-60770	A2	19980415		
	US 1998-85318	A2	19980526		
	US 2000-512139	A2	20000223		
	US 2001-309747P	P	20010801		

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2003 ACS
AN 1997:803775 CAPLUS
DN 128:53192
TI Loading and unloading of permeating protectants for cell, tissue, and organ cryopreservation by vitrification
IN Bronshtein, Victor
PA Universal Preservation Technologies, Inc., USA; Bronshtein, Victor
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9745010	A1	19971204	WO 1997-US9207	19970529
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9732900	A1	19980105	AU 1997-32900	19970529
	EP 921723	A1	19990616	EP 1997-928712	19970529
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001517204	T2	20011002	JP 1997-542954	19970529
PRAI	US 1996-18638P	P	19960529		
	WO 1997-US9207	W	19970529		

L6 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2003 ACS
AN 1992:169637 CAPLUS
DN 116:169637
TI **Trehalose** in **preservation** of **cells** as controls or standards in cellular analysis
IN Davis, Kenneth A.
PA Becton, Dickinson and Co., USA

SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 469766	A1	19920205	EP 1991-306643	19910722
	EP 469766	B1	19951206		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2043045	AA	19920124	CA 1991-2043045	19910522
	CA 2043045	C	19990810		
	AU 9177248	A1	19920206	AU 1991-77248	19910522
	AU 645807	B2	19940127		
	AT 131283	E	19951215	AT 1991-306643	19910722
	ES 2083529	T3	19960416	ES 1991-306643	19910722
	JP 05133957	A2	19930528	JP 1991-182642	19910723
	JP 2573757	B2	19970122		
	US 6008052	A	19991228	US 1992-897616	19920610
PRAI	US 1990-556934	A	19900723		

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(FILE 'HOME' ENTERED AT 18:19:15 ON 13 MAY 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:19:33 ON 13 MAY 2003

L1 52869 S TREHALOSE OR DISACCHARIDE
L2 25050 S (CRYOPRESERV? OR PRESERV?)(6A)CELL
L3 33384 S LOAD?(6A)CELL
L4 58264 S L2 OR L3
L5 62 S L1(7A)L4
L6 37 DUP REM L5 (25 DUPLICATES REMOVED)
L7 6257377 S TEMPERATURE OR HEAT?
L8 15 S L6 AND L7

=> d au ti so 1-15 l8

L8 ANSWER 1 OF 15 MEDLINE
AU Chen T; Acker J P; Eroglu A; Cheley S; Bayley H; Fowler A; Toner M
TI Beneficial effect of intracellular trehalose on the membrane integrity of dried mammalian cells.
SO CRYOBIOLOGY, (2001 Sep) 43 (2) 168-81.
Journal code: 0006252. ISSN: 0011-2240.

L8 ANSWER 2 OF 15 MEDLINE
AU Diniz-Mendes L; Bernardes E; de Araujo P S; Panek A D; Paschoalin V M
TI **Preservation** of frozen yeast **cells** by **trehalose**.
SO BIOTECHNOLOGY AND BIOENGINEERING, (1999 Dec 5) 65 (5) 572-8.
Journal code: 7502021. ISSN: 0006-3592.

L8 ANSWER 3 OF 15 MEDLINE
AU Isowa N; Hitomi S; Wada H
TI **Trehalose**-containing solutions enhance **preservation** of cultured endothelial **cells**.
SO ANNALS OF THORACIC SURGERY, (1996 Feb) 61 (2) 542-5.
Journal code: 15030100R. ISSN: 0003-4975.

L8 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Crowe, John H.; Crowe, Lois M.; Tablin, Fern; Wolkers, Willem F.; Tsvetkova, Nelly M.; Oliver, Ann F.
TI Erythrocytic cells and method for preserving cells
SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U.S. Ser. No. 927,760.
CODEN: USXXCO

L8 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Toner, Mehmet; Eroglu, Ali; Toth, Thomas
TI Microinjection of cryoprotectants for preservation of cells
SO U.S. Pat. Appl. Publ., 32 pp., Cont.-in-part of U.S. Ser. No. 798,327.
CODEN: USXXCO

L8 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Crowe, John H.; Tablin, Fern; Wolkers, Willem F.; Oliver, Ann E.; Walker, Naomi J.; Htoo, Thurein; Jamil, Kamran
TI Eukaryotic cells and method for preserving cells
SO U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Ser. No. 828,627.
CODEN: USXXCO

L8 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS
AU Limaye, L. S.; Kale, V. P.
TI Cryopreservation of human hematopoietic cells with membrane stabilizers and bioantioxidants as additives in the conventional freezing medium
SO Journal of Hematotherapy & Stem Cell Research (2001), 10(5), 709-718

CODEN: JHERFM; ISSN: 1525-8165

L8 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS
AU Kim, Sang-Ic; Choi, Hyung-Kyoon; Son, Joo-Sun; Yun, Jeong-Hwan; Jang, Moon-Suk; Kim, Hong-Rak; Song, Jai-Young; Kim, Jin-Hyun; Choi, Ho-Joon; Hong, Seung-Suh
TI Cryopreservation of Taxus chinensis suspension cell cultures
SO Cryo-Letters (2001), 22(1), 43-50
CODEN: CRLED9; ISSN: 0143-2044

L8 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Codd, Anthony Arthur
TI Storage of microorganisms, cells and tissue
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L8 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Livesey, Stephen Anthony; Burnett, Michael Brian; Connor, Jerome; Wagner, Christopher Todd
TI Cryopreservation of human red blood cells
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2

L8 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Beattie, Gillian M.; Crowe, John H.; Tablin, Fern; Hayek, Alberto
TI Cryopreservation of human adult and fetal pancreatic cells and human platelets
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2

L8 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
IN Bronshtein, Victor
TI Loading and unloading of permeating protectants for cell, tissue, and organ cryopreservation by vitrification
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2

L8 ANSWER 13 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU Abadias, Maribel (1); Usall, Josep; Teixido, Neus; Vinas, Immaculada
TI Liquid formulation of the postharvest biocontrol agent Candida sake CPA-1 in isotonic solutions.
SO Phytopathology, (April 2003, 2003) Vol. 93, No. 4, pp. 436-442. print.
ISSN: 0031-949X.

L8 ANSWER 14 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU Leslie, S. B. (1); Israeli, E.; Crowe, J. H. (1)
TI **Trehalose preserves** membranes and proteins in intact **cells**.
SO Biophysical Journal, (1993) Vol. 64, No. 2 PART 2, pp. A294.
Meeting Info.: Thirty-seventh Annual Meeting of the Biophysical Society Washington, D.C., USA February 14-18, 1993
ISSN: 0006-3495.

L8 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AU JEYALECTUMIE C; SUBRAMONIAM T
TI CRYOPRESERVATION OF SPERMATOPHORES AND SEMINAL PLASMA OF THE EDIBLE CRAB SCYLLA-SERRATA.
SO BIOL BULL (WOODS HOLE), (1989) 177 (2), 247-253.
CODEN: BIBUBX. ISSN: 0006-3185.

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=> d his

     (FILE 'HOME' ENTERED AT 18:19:15 ON 13 MAY 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:19:33 ON 13 MAY
     2003
L1         52869 S TREHALOSE OR DISACCHARIDE
L2         25050 S (CRYOPRESERV? OR PRESERV?)(6A)CELL
L3         33384 S LOAD?(6A)CELL
L4         58264 S L2 OR L3
L5            62 S L1(7A)L4
L6            37 DUP REM L5 (25 DUPLICATES REMOVED)
L7       6257377 S TEMPERATURE OR HEAT?
L8            15 S L6 AND L7
L9           184 S PHASE(3A)TEMPERATURE AND L1
L10            6 S L9 AND L4
L11            3 DUP REM L10 (3 DUPLICATES REMOVED)

=> d bib ab 1-3 l11

L11  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:638128  CAPLUS
DN   137:152032
TI   Erythrocytic cells and method for preserving
     cells
IN   Crowe, John H.; Crowe, Lois M.; Tablin, Fern; Wolkers, Willem F.;
     Tsvetkova, Nelly M.; Oliver, Ann F.
PA   USA
SO   U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U.S. Ser. No. 927,760.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 3
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
     ---------------    ----  --------       ---------------  --------
PI   US 2002114791      A1    20020822       US 2002-52162    20020116
     US 2002076445      A1    20020620       US 2001-927760   20010809
     WO 2003014331      A1    20030220       WO 2002-US24773  20020805
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
             VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG
PRAI US 2000-501773     B2    20000210
     US 2001-828627     A2    20010405
     US 2001-927760     A2    20010809
     US 2002-52162      A     20020116
AB   The invention concerns a dehydrated compn. is provided that includes
     freeze-dried erythrocytic cells. Alc. (e.g., sterol or cholesterol) is at
     least partially removed from erythrocytic cells including erythrocytic
     membranes. After removal of at least part of the alc., the erythrocytic
     cells have a low phase transition temp. range, an
     intermediate phase transition temp. range, and a high
     phase transition temp. range. The erythrocytic
     cells may be loaded with an oligosaccharide (e.g.,
     trehalose) which preserves biol. properties during freeze-drying
     and rehydration. A process for increasing cooperativity of a phase
     transition of an erythrocytic cell. A process for preserving and/or
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increasing the survival of dehydrated erythrocytic cells, including storing dehydrated erythrocytic cells having a residual water content equal to or less than about 0.30 g of water per g of dry wt. erythrocytic cells.

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2002:466549 CAPLUS
DN 137:17442
TI Eukaryotic **cells** and method for **preserving cells**
IN Crowe, John H.; Tablin, Fern; Wolkers, Willem F.; Oliver, Ann E.; Walker, Naomi J.; Htoo, Thurein; Jamil, Kamran
PA USA
SO U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Ser. No. 828,627.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002076445	A1	20020620	US 2001-927760	20010809
	US 2002009500	A1	20020124	US 2001-938408	20010823
	US 2002114791	A1	20020822	US 2002-52162	20020116
	WO 2003014305	A2	20030220	WO 2002-US24772	20020805

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	WO 2003014331	A1	20030220	WO 2002-US24773	20020805

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI	US 2000-501773	B1	20000210
	US 2001-828627	A2	20010405
	US 2001-927760	A2	20010809
	US 2002-52162	A	20020116

AB A dehydrated compn. is provided that includes freeze-dried eukaryotic cells. The eukaryotic **cells** are **loaded** with an oligosaccharide (e.g., **trehalose**) which preserves biol. properties during freeze-drying and rehydration. The oligosaccharide loading is conducted at a temp. of from greater than about 25.degree.. to less than about 50.degree.., more preferably at about 35.degree.., with the loading soln. having the oligosaccharide in an amt. from about 10 mM to about 100 mM. These freeze-dried eukaryotic cells are rehydratable. A process for preserving and/or increasing the survival of dehydrated eukaryotic cells, including storing dehydrated eukaryotic cells having a residual water content greater than about 0.15 g of water per g of dry wt. eukaryotic cells.

L11 ANSWER 3 OF 3 MEDLINE DUPLICATE 1
AN 97448357 MEDLINE

DN 97448357 PubMed ID: 9302765
TI Stabilization of dry membranes by mixtures of hydroxyethyl starch and glucose: the role of vitrification.
AU Crowe J H; Oliver A E; Hoekstra F A; Crowe L M
CS Section of Molecular and Cellular Biology, University of California, Davis 95616, USA.
SO CRYOBIOLOGY, (1997 Aug) 35 (1) 20-30.
Journal code: 0006252. ISSN: 0011-2240.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199710
ED Entered STN: 19971105
Last Updated on STN: 19971105
Entered Medline: 19971023
AB R. P. Goodrich and co-workers (1989, U.S. Patent 4,874,690; 1992, Proc. Natl. Acad. Sci. USA 89,967-971) have reported that red blood **cells** can be **preserved** in the dry state by addition of mixtures of hydroxyethyl starch (HES) and glucose. More recently, Spieles and co-workers (1996, Cryo-Lett. 17, 43-52) found that HES alone is insufficient to **preserve** the dry **cells** and concluded on this basis that the studies of Goodrich et al. were incorrect. In the present paper we revisit that suggestion, using liposomes as a model to study effects of HES and glucose on membrane stability. In previous studies we and others have established that liposomes can be stabilized in the dry state if they are dried in the presence of **disaccharides**. Monosaccharides have not been effective. Measurements of effects of glucose on phase transitions in the dry lipids and vibrational frequency of the phosphate headgroup suggest that glucose shows an interaction with dry egg phosphatidylcholine similar to that seen with **disaccharides**. Nevertheless, glucose does not inhibit fusion in liposomes during drying, and it does not prevent leakage. Hydroxyethyl starch, which has a very high glass transition (Tg), inhibits fusion in the dry liposomes, but it does not depress the liquid crystalline to gel **phase** transition **temperature** (Tm) in the dry phospholipids, does not cause a shift in the phosphate vibration indicative of hydrogen bonding of the sugar to the phosphate, and does not stop leakage of trapped carboxyfluorescein. However, if glucose is added to the HES-containing samples, the liposomes are stabilized, so long as the samples are maintained below the Tg of the mixture. If they are heated above that Tg they fuse and leak their contents. We conclude that both glass formation and depression of Tm in the dry lipids are required. The role of glass formation in stabilization during drying of liposomes appears to be inhibition of fusion.